

Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation: Standard #4 for ICP 3300 Low

Product Number: RP33LOW0

Other Identifying Product Numbers: RP33LOW0-1A

1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

1.3. Details of the Supplier of the Safety Data Sheet

Company: Ricca Chemical Company

Address: 448 West Fork Drive

Arlington, TX 76012 USA

Telephone: 888-467-4222

1.4. Emergency Telephone Number (24 hours)

CHEMTREC (USA)

800-424-9300

CHEMTREC (International)

1+ 703-527-3887

SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture

For the full text of the Hazard and Precautionary Statements listed below, see Section 16.

Hazard Class	Category	Hazard Statements:	Precautionary Statements:
Skin Corrosion / Irritation	Category 1	H314	P260, P264, P280, P301+P330+P331, P303+P361+P353, P363, P304+P340, P310, P321, P305+P351+P338, P405, P501
Eye Damage / Irritation	Category 2	H319	P264, P280, P305+P351+P338, P337+P313

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2.2. GHS Label Elements

Pictograms:



Signal Word: **Danger**

Hazard Statements:

Hazard Number	Hazard Statement
H314	Causes severe skin burns and eye damage.
H319	Causes serious eye irritation.

Precautionary Statements:

Precautionary Number	Precautionary Statement
P260	Do not breathe fumes, mist, vapors, or spray.
P264	Wash arms, hands and face thoroughly after handling.
P280	Wear protective gloves and eye protection.
P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or physician.
P321	Specific treatment (Wash areas of contact with water.).
P337+P313	If eye irritation persists: Get medical attention.
P363	Wash contaminated clothing before reuse.
P405	Store locked up.
P501	Dispose of contents in accordance with local, state, federal and international regulations.

2.4. Hazards not Otherwise Classified or Covered by GHS

Data not available.

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SECTION 3: Composition / Information on Ingredients

3.1. Components of Substance or Mixture

Chemical Name	Formula	Molecular Weight	CAS Number	Weight%
Water	H ₂ O	18.01 g/mol	7732-18-5	98.03
Nitric Acid	HNO ₃	63.01 g/mol	7697-37-2	1.96
Aluminum Nitrate Nonahydrate	Al(NO ₃) ₃ ·9H ₂ O	375.13 g/mol	7784-27-2	< 0.1
Manganous Nitrate Tetrahydrate	Mn(NO ₃) ₂ ·4H ₂ O	251.01 g/mol	15710-66-4	< 0.1
Ammonium Dihydrogen Phosphate	NH ₄ H ₂ PO ₄	97.99 g/mol	7722-76-1	< 0.1
Ammonium Hexafluorosilicate (IV)	(NH ₄) ₂ SiF ₆	178.15 g/mol	16919-19-0	< 0.1
Potassium Nitrate	KNO ₃	101.10 g/mol	7757-79-1	< 0.1
Sodium Carbonate	Na ₂ CO ₃	105.98 g/mol	497-19-8	< 0.1
Calcium Carbonate	CaCO ₃	100.09 g/mol	471-34-1	< 0.1
Chromium Nitrate Nonahydrate	Cr(NO ₃) ₃ ·9H ₂ O	238.01 g/mol	7789-02-8	< 0.1
Zinc	Zn	65.40 g/mol	7440-66-6	< 0.1
Copper	Cu	63.54 g/mol	7440-50-8	< 0.1
Magnesium	Mg	24.30 g/mol	7439-95-4	< 0.1
Iron	Fe	55.84 g/mol	7439-89-6	< 0.1
Hydrofluoric Acid	HF	20.00 g/mol	7664-39-3	< 0.1
Arsenic	As	74.92 g/mol	7440-38-2	< 0.1
Nickel	Ni	58.69 g/mol	7440-02-0	< 0.1
Lead	Pb	207.2 g/mol	7439-92-1	< 0.1
Barium Nitrate	Ba(NO ₃) ₂	261.33 g/mol	10022-31-8	< 0.1

SECTION 4: First-Aid Measures

4.1. General First Aid Information

Eye Contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. May cause irritation, redness, pain, and tearing.

Inhalation: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Skin Contact: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. May cause irritation, redness and pain. Contact will discolor skin yellow-brown depending on exposure which will wear off after a period of time.

Ingestion: IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Dilute with water or milk. Do not induce vomiting. Call a physician if necessary.

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4.2. Most Important Symptoms and Effects, Acute and Delayed

Causes severe skin burns and eye damage. Causes serious eye irritation. Caution! Mildly corrosive liquid. Avoid contact with skin, eyes, and clothing. If swallowed, dilute with water and call a physician. Wash areas of contact with plenty of water. EYE CONTACT: May cause irritation, redness, pain, and tearing. SKIN CONTACT: May cause irritation, redness and pain. Contact will discolor skin yellow-brown depending on exposure which will wear off after a period of time.

4.3. Medical Attention or Special Treatment Needed

Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water.). Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, g oxygen. Flush with plenty of water for at least 15 minutes. Call a physician if irritation develops. Dilute with water or milk. Do not induce vomiting. Call physician if necessary.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

Use water or water spray.

5.2. Specific Hazards Arising from the Substance or Mixture

Not combustible, but substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. Can react with metals to release flammable hydrogen gas. May react explosively with combustible organic or readily oxidizable materials such as: alcohols, turpentine, charcoal, organic refuse, metal powder, hydrogen sulfide, etc.

5.3. Special Protective Equipment for Firefighters

Use protective clothing and breathing equipment appropriate for the surrounding fire.

SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Wear protective gloves and eye protection.

6.2. Cleanup and Containment Methods and Materials

Dilute with water, then flush to sewer if local regulations allow. If not allowed, save for recovery or recycling in an approved waste disposal facility. Always dispose of in accordance with local, state and federal regulations.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling and Storage Conditions

Store locked up. As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage. Keep out of direct sunlight and away from heat, water, and incompatible materials.

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SECTION 8: Exposure Controls / Personal Protection

8.1 Control Parameters

Chemical Name	Limit Type	Country	Exposure Limit	Information Source
Barium Nitrate (10022-31-8)	TLV-TWA	USA	"0.5 mg/m ³ TWA (as Ba)" As Barium soluble compounds [RR-00049-7]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Barium Nitrate (10022-31-8)	TWA	USA	"0.5 mg/m ³ TWA (regulated under CAS 7440-39-3, as Ba)" As Barium, soluble compounds [RR-00049-7]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Barium Nitrate (10022-31-8)	TLV-TWA	USA	0.5 mg/m ³ TWA (as Ba)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Barium Nitrate (10022-31-8)	TWA	USA	0.5 mg/m ³ TWA (regulated under CAS 7440-39-3, as Ba)	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Manganous Nitrate Tetrahydrate (1571)	TLV-TWA	USA	"0.02 mg/m ³ TWA (respirable particulate matter, as Mn); 0.1 mg/m ³ TWA (inhalable particulate matter, as Mn)" As Manganese inorganic compounds [RR-03861-9]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Manganous Nitrate Tetrahydrate (1571)	PEL-Ceiling	USA	"5 mg/m ³ Ceiling (as Mn)" As Manganese compounds [RR-00602-0]	U.S. - OSHA - Final PELs - Ceiling Limits
Manganous Nitrate Tetrahydrate (1571)	TLV-TWA	USA	"0.02 mg/m ³ TWA (respirable particulate matter, as Mn); 0.1 mg/m ³ TWA (inhalable particulate matter, as Mn)" As Manganese inorganic compounds [RR-03861-9]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Manganous Nitrate Tetrahydrate (1571)	PEL-Ceiling	USA	"5 mg/m ³ Ceiling (as Mn)" As Manganese compounds [RR-00602-0]	U.S. - OSHA - Final PELs - Ceiling Limits
Manganous Nitrate Tetrahydrate (1571)	PEL-Ceiling	USA	5 mg/m ³ Ceiling (as Mn)	U.S. - OSHA - Final PELs - Ceiling Limits

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Manganous Nitrate Tetrahydrate (1571 PEL-Ceiling	USA	"5 mg/m ³ Ceiling (as Mn)" As Manganese compounds [RR-00602-0]	U.S. - OSHA - Final PELs - Ceiling Limits
Manganous Nitrate Tetrahydrate (1571 TLV-TWA	USA	0.02 mg/m ³ TWA (respirable particulate matter, as Mn); 0.1 mg/m ³ TWA (inhalable particulate matter, as Mn)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Manganous Nitrate Tetrahydrate (1571 TLV-TWA	USA	"0.02 mg/m ³ TWA (respirable particulate matter, as Mn); 0.1 mg/m ³ TWA (inhalable particulate matter, as Mn)" As Manganese inorganic compounds [RR-03861-9]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Manganous Nitrate Tetrahydrate (1571 PEL-Ceiling	USA	"5 mg/m ³ Ceiling (as Mn)" As Manganese compounds [RR-00602-0]	U.S. - OSHA - Final PELs - Ceiling Limits
Manganous Nitrate Tetrahydrate (1571 PEL-Ceiling	USA	"5 mg/m ³ Ceiling (as Mn)" As Manganese compounds [RR-00602-0]	U.S. - OSHA - Final PELs - Ceiling Limits
Ammonium Hexafluorosilicate (IV) (16 $\frac{1}{2}$ TLV-TWA	USA	"2.5 mg/m ³ TWA (as F)" As Fluorides [RR-02792-9]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Ammonium Hexafluorosilicate (IV) (16 $\frac{1}{2}$ TWA	USA	"2.5 mg/m ³ TWA (as F)" As Fluorides [RR-02792-9]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Ammonium Hexafluorosilicate (IV) (16 $\frac{1}{2}$ TWA	USA	"2.5 mg/m ³ TWA (as F)" As Fluorides [RR-02792-9]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Ammonium Hexafluorosilicate (IV) (16 $\frac{1}{2}$ TLV-TWA	USA	"2.5 mg/m ³ TWA (as F)" As Fluorides [RR-02792-9]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Ammonium Hexafluorosilicate (IV) (16 $\frac{1}{2}$ TLV-TWA	USA	"2.5 mg/m ³ TWA (as F)" As Fluorides [RR-02792-9]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Ammonium Hexafluorosilicate (IV) (16 $\frac{1}{2}$ TWA	USA	"2.5 mg/m ³ TWA (as F)" As Fluorides [RR-02792-9]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Ammonium Hexafluorosilicate (IV) (16 $\frac{1}{2}$ TLV-TWA	USA	"2.5 mg/m ³ TWA (as F)" As Fluorides [RR-02792-9]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Ammonium Hexafluorosilicate (IV) (16 $\frac{1}{2}$ TWA	USA	"2.5 mg/m ³ TWA (as F)" As Fluorides [RR-02792-9]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Ammonium Hexafluorosilicate (IV) (16 $\frac{1}{2}$ TWA	USA	2.5 mg/m ³ TWA (as F)	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Ammonium Hexafluorosilicate (IV) (16 $\frac{1}{2}$ TLV-TWA	USA	2.5 mg/m ³ TWA (as F)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

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Ammonium Hexafluorosilicate (IV) (169 TLV-TWA		USA	"2.5 mg/m ³ TWA (as F)" As Fluorides [RR-02792-9]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Ammonium Hexafluorosilicate (IV) (169 TWA		USA	"2.5 mg/m ³ TWA (as F)" As Fluorides [RR-02792-9]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Calcium Carbonate (471-34-1)	TWA	USA	"15 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction)" As Calcium carbonate [1317-65-3]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Lead (7439-92-1)	PEL	USA	"30 µg/m ³ Action Level (See 29 CFR 1910.1025); 50 µg/m ³ TWA" As Lead [7439-92-1]	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Lead (7439-92-1)	TLV-TWA	USA	"0.05 mg/m ³ TWA" As Lead [7439-92-1]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Lead (7439-92-1)	TWA	USA	"50 µg/m ³ TWA" As Lead [7439-92-1]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Lead (7439-92-1)	TLV-TWA	USA	0.05 mg/m ³ TWA	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Lead (7439-92-1)	TWA	USA	50 µg/m ³ TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Lead (7439-92-1)	PEL	USA	30 µg/m ³ Action Level (See 29 CFR 1910.1025); 50 µg/m ³ TWA	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Lead (7439-92-1)	PEL	USA	"30 µg/m ³ Action Level (See 29 CFR 1910.1025, as Pb); 50 µg/m ³ TWA (as Pb)" As Lead, inorganic compounds [RR-00538-9]	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Lead (7439-92-1)	TLV-TWA	USA	"0.05 mg/m ³ TWA (as Pb)" As Lead inorganic compounds [RR-00538-9]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Lead (7439-92-1)	TWA	USA	"50 µg/m ³ TWA (as Pb)" As Lead, inorganic compounds [RR-00538-9]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Nickel (7440-02-0)	TWA	USA	"1 mg/m ³ TWA" As Nickel [7440-02-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Nickel (7440-02-0)	TLV-TWA	USA	"1.5 mg/m ³ TWA (inhalable particulate matter)" As Nickel, elemental [7440-02-0]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

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Nickel (7440-02-0)	TLV-TWA	USA	"1.5 mg/m ³ TWA (inhalable particulate matter)" As Nickel, elemental [7440-02-0]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Nickel (7440-02-0)	TWA	USA	"1 mg/m ³ TWA" As Nickel [7440-02-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Nickel (7440-02-0)	TLV-TWA	USA	"1.5 mg/m ³ TWA (inhalable particulate matter)" As Nickel, elemental [7440-02-0]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Nickel (7440-02-0)	TWA	USA	"1 mg/m ³ TWA" As Nickel [7440-02-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Nickel (7440-02-0)	TWA	USA	"1 mg/m ³ TWA" As Nickel [7440-02-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Nickel (7440-02-0)	TLV-TWA	USA	"1.5 mg/m ³ TWA (inhalable particulate matter)" As Nickel, elemental [7440-02-0]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Nickel (7440-02-0)	TLV-TWA	USA	"1.5 mg/m ³ TWA (inhalable particulate matter)" As Nickel, elemental [7440-02-0]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Nickel (7440-02-0)	TWA	USA	"1 mg/m ³ TWA" As Nickel [7440-02-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Nickel (7440-02-0)	TLV-TWA	USA	"1.5 mg/m ³ TWA (inhalable particulate matter)" As Nickel, elemental [7440-02-0]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Nickel (7440-02-0)	TWA	USA	"1 mg/m ³ TWA" As Nickel [7440-02-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Nickel (7440-02-0)	TLV-TWA	USA	1.5 mg/m ³ TWA (inhalable particulate matter)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Nickel (7440-02-0)	TWA	USA	1 mg/m ³ TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Nickel (7440-02-0)	TLV-TWA	USA	"1.5 mg/m ³ TWA (inhalable particulate matter)" As Nickel, elemental [7440-02-0]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Nickel (7440-02-0)	TWA	USA	"1 mg/m ³ TWA" As Nickel [7440-02-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)

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Arsenic (7440-38-2)	TLV-TWA	USA	"0.01 mg/m ³ TWA" As Arsenic, elemental [7440-38-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Arsenic (7440-38-2)	TLV-TWA	USA	"0.01 mg/m ³ TWA" As Arsenic, elemental [7440-38-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Arsenic (7440-38-2)	TLV-TWA	USA	0.01 mg/m ³ TWA	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Arsenic (7440-38-2)	TLV-TWA	USA	"0.01 mg/m ³ TWA (as As)" As Arsenic inorganic compounds [RR-00065-7]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Arsenic (7440-38-2)	TWA	USA	"10 µg/m ³ TWA (as As)" As Arsenic, inorganic compounds [RR-00065-7]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Arsenic (7440-38-2)	PEL	USA	"10 µg/m ³ TWA (See 29 CFR 1910.1018; except Arsine, as As); 5 µg/m ³ Action Level (as As)" As Inorganic arsenic compounds [RR-00065-7]	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Arsenic (7440-38-2)	TLV-TWA	USA	"0.01 mg/m ³ TWA" As Arsenic, elemental [7440-38-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Arsenic (7440-38-2)	TLV-TWA	USA	"0.01 mg/m ³ TWA" As Arsenic, elemental [7440-38-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Copper (7440-50-8)	TLV-TWA	USA	"0.2 mg/m ³ TWA (fume)" As Copper [7440-50-8]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Copper (7440-50-8)	TWA	USA	"0.1 mg/m ³ TWA (fume); 1 mg/m ³ TWA (dust and mist)" As Copper [7440-50-8]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Copper (7440-50-8)	TWA	USA	"0.1 mg/m ³ TWA (fume); 1 mg/m ³ TWA (dust and mist)" As Copper [7440-50-8]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Copper (7440-50-8)	TLV-TWA	USA	"0.2 mg/m ³ TWA (fume)" As Copper [7440-50-8]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Copper (7440-50-8)	TWA	USA	"0.1 mg/m ³ TWA (fume); 1 mg/m ³ TWA (dust and mist)" As Copper [7440-50-8]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Copper (7440-50-8)	TLV-TWA	USA	"0.2 mg/m ³ TWA (fume)" As Copper [7440-50-8]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

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Copper (7440-50-8)	TLV-TWA	USA	"0.2 mg/m ³ TWA (fume)" As Copper [7440-50-8]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Copper (7440-50-8)	TWA	USA	"0.1 mg/m ³ TWA (fume); 1 mg/m ³ TWA (dust and mist)" As Copper [7440-50-8]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Copper (7440-50-8)	TWA	USA	"0.1 mg/m ³ TWA (fume); 1 mg/m ³ TWA (dust and mist)" As Copper [7440-50-8]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Copper (7440-50-8)	TLV-TWA	USA	"0.2 mg/m ³ TWA (fume)" As Copper [7440-50-8]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Copper (7440-50-8)	TWA	USA	0.1 mg/m ³ TWA (fume); 1 mg/m ³ TWA (dust and mist)	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Copper (7440-50-8)	TLV-TWA	USA	0.2 mg/m ³ TWA (fume)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Copper (7440-50-8)	TLV-TWA	USA	"1 mg/m ³ TWA (dust and mist, as Cu)" As Copper compounds [RR-00595-8]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Copper (7440-50-8)	TLV-TWA	USA	"1 mg/m ³ TWA (dust and mist, as Cu)" As Copper compounds [RR-00595-8]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Hydrofluoric Acid (7664-39-3)	TWA	USA	"3 ppm TWA (as F)" As Hydrogen fluoride [7664-39-3]; "2.5 mg/m ³ TWA (as F)" As Fluorides [RR-02792-9]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Hydrofluoric Acid (7664-39-3)	TLV-Ceiling	USA	"2 ppm Ceiling (as F)" As Hydrogen fluoride [7664-39-3]	ACGIH - Threshold Limit Values - Ceilings (TLV-C)
Hydrofluoric Acid (7664-39-3)	TLV-TWA	USA	"0.5 ppm TWA (as F)" As Hydrogen fluoride [7664-39-3]; "2.5 mg/m ³ TWA (as F)" As Fluorides [RR-02792-9]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Hydrofluoric Acid (7664-39-3)	TLV-TWA	USA	"0.5 ppm TWA (as F)" As Hydrogen fluoride [7664-39-3]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Hydrofluoric Acid (7664-39-3)	TWA	USA	"3 ppm TWA (as F)" As Hydrogen fluoride [7664-39-3]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)

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Hydrofluoric Acid (7664-39-3)	TLV-Ceiling	USA	"2 ppm Ceiling (as F)" As Hydrogen fluoride [7664-39-3]	ACGIH - Threshold Limit Values - Ceilings (TLV-C)
Hydrofluoric Acid (7664-39-3)	TLV-TWA	USA	0.5 ppm TWA (as F)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Hydrofluoric Acid (7664-39-3)	TLV-Ceiling	USA	2 ppm Ceiling (as F)	ACGIH - Threshold Limit Values - Ceilings (TLV-C)
Hydrofluoric Acid (7664-39-3)	TWA	USA	3 ppm TWA (as F)	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Hydrofluoric Acid (7664-39-3)	TWA	USA	2.5 mg/m ³ TWA (as F)	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Hydrofluoric Acid (7664-39-3)	TLV-TWA	USA	2.5 mg/m ³ TWA (as F)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Hydrofluoric Acid (7664-39-3)	TLV-Ceiling	USA	"2 ppm Ceiling (as F)" As Hydrogen fluoride [7664-39-3]	ACGIH - Threshold Limit Values - Ceilings (TLV-C)
Hydrofluoric Acid (7664-39-3)	TLV-TWA	USA	"0.5 ppm TWA (as F)" As Hydrogen fluoride [7664-39-3]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Hydrofluoric Acid (7664-39-3)	TWA	USA	"3 ppm TWA (as F)" As Hydrogen fluoride [7664-39-3]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Hydrofluoric Acid (7664-39-3)	TLV-Ceiling	USA	"2 ppm Ceiling (as F)" As Hydrogen fluoride [7664-39-3]	ACGIH - Threshold Limit Values - Ceilings (TLV-C)
Hydrofluoric Acid (7664-39-3)	TLV-TWA	USA	"0.5 ppm TWA (as F)" As Hydrogen fluoride [7664-39-3]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Hydrofluoric Acid (7664-39-3)	TWA	USA	"3 ppm TWA (as F)" As Hydrogen fluoride [7664-39-3]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Nitric Acid (7697-37-2)	TLV-STEL	USA	"4 ppm STEL" As Nitric acid [7697-37-2]	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Nitric Acid (7697-37-2)	TLV-TWA	USA	"2 ppm TWA" As Nitric acid [7697-37-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Nitric Acid (7697-37-2)	TWA	USA	"2 ppm TWA; 5 mg/m ³ TWA" As Nitric acid [7697-37-2]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Nitric Acid (7697-37-2)	TLV-TWA	USA	"2 ppm TWA" As Nitric acid [7697-37-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

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Nitric Acid (7697-37-2)	TWA	USA	"2 ppm TWA; 5 mg/m ³ TWA" As Nitric acid [7697-37-2]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Nitric Acid (7697-37-2)	TLV-STEL	USA	"4 ppm STEL" As Nitric acid [7697-37-2]	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Nitric Acid (7697-37-2)	TLV-STEL	USA	4 ppm STEL	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Nitric Acid (7697-37-2)	TLV-TWA	USA	2 ppm TWA	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Nitric Acid (7697-37-2)	TWA	USA	2 ppm TWA; 5 mg/m ³ TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Nitric Acid (7697-37-2)	TWA	USA	"2 ppm TWA; 5 mg/m ³ TWA" As Nitric acid [7697-37-2]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Nitric Acid (7697-37-2)	TLV-TWA	USA	"2 ppm TWA" As Nitric acid [7697-37-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Nitric Acid (7697-37-2)	TLV-STEL	USA	"4 ppm STEL" As Nitric acid [7697-37-2]	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Nitric Acid (7697-37-2)	TWA	USA	"2 ppm TWA; 5 mg/m ³ TWA" As Nitric acid [7697-37-2]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Nitric Acid (7697-37-2)	TLV-STEL	USA	"4 ppm STEL" As Nitric acid [7697-37-2]	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Nitric Acid (7697-37-2)	TLV-TWA	USA	"2 ppm TWA" As Nitric acid [7697-37-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Nitric Acid (7697-37-2)	TWA	USA	"2 ppm TWA; 5 mg/m ³ TWA" As Nitric acid [7697-37-2]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Nitric Acid (7697-37-2)	TLV-TWA	USA	"2 ppm TWA" As Nitric acid [7697-37-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Nitric Acid (7697-37-2)	TLV-STEL	USA	"4 ppm STEL" As Nitric acid [7697-37-2]	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Nitric Acid (7697-37-2)	TLV-TWA	USA	"2 ppm TWA" As Nitric acid [7697-37-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Nitric Acid (7697-37-2)	TLV-STEL	USA	"4 ppm STEL" As Nitric acid [7697-37-2]	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Nitric Acid (7697-37-2)	TWA	USA	"2 ppm TWA; 5 mg/m ³ TWA" As Nitric acid [7697-37-2]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)

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Chromium Nitrate Nonahydrate (7789-1) TWA	USA	"0.5 mg/m ³ TWA (as Cr)" As Chromium(III) compounds [RR-03889-1]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Chromium Nitrate Nonahydrate (7789-1) TWA	USA	"0.5 mg/m ³ TWA (as Cr)" As Chromium(III) compounds [RR-03889-1]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Chromium Nitrate Nonahydrate (7789-1) TWA	USA	0.5 mg/m ³ TWA (as Cr)	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Chromium Nitrate Nonahydrate (7789-1) TWA	USA	"0.5 mg/m ³ TWA (as Cr)" As Chromium(III) compounds [RR-03889-1]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Chromium Nitrate Nonahydrate (7789-1) TWA	USA	"0.5 mg/m ³ TWA (as Cr)" As Chromium(III) compounds [RR-03889-1]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)

8.2. Exposure Controls

Engineering Controls: No specific controls are needed. Normal room ventilation is adequate.

Respiratory Protection: Normal room ventilation is adequate.

Skin Protection: Wear protective gloves and eye protection. Chemical resistant gloves.

Eye Protection: Wear protective gloves and eye protection. Safety glasses or goggles.

8.3. Personal Protective Equipment

Wear protective gloves and eye protection. Normal room ventilation is adequate. Chemical resistant gloves. Safety glasses or goggles.

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SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Appearance: Colorless liquid

Physical State: Liquid

Odor: Data not available.

Odor Threshold: Data not available.

pH: acidic

Melting/Freezing Point: Approximately 0°C

Initial Boiling Point/Range: Approximately 100°C - Approximately 100°C

Flash Point: Data not available.

Evaporation Rate: Data not available.

Flammability: Data not available.

Flammability/Explosive Limits: Data not available.

Vapor Pressure: Data not available.

Vapor Density: Data not available.

Relative Density: 1.01

Solubility: Miscible

Partition Coefficient: Data not available.

Auto-Ignition Temperature: Data not available.

Decomposition Temperature: Data not available.

Viscosity: Data not available.

Explosive Properties: Data not available.

Oxidizing Properties: Data not available.

SECTION 10: Stability and Reactivity

10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage.

10.2. Possibility of Hazardous Reactions

Data not available.

10.3. Conditions to Avoid and Incompatible Materials

Strong bases, metallic powders, Carbides, Hydrogen Sulfide, Turpentine and combustible organics.

10.4. Hazardous Decomposition Products

Will not occur.



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SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity - Oral Exposure:

Not applicable.

Acute Toxicity - Dermal Exposure:

Not applicable.

Acute Toxicity - Inhalation Exposure:

Not applicable.

Acute Toxicity - Other Information:

LDLo, Oral, Human: 430 mg/kg (Nitric Acid), details of toxic effects not reported other than lethal dose value.

Skin Corrosion and Irritation:

Causes severe skin burns and eye damage. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water.). IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Serious Eye Damage and Irritation:

Causes serious eye irritation. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Respiratory Sensitization:

Not applicable.

Skin Sensitization:

Not applicable.

Germ Cell Mutagenicity:

Not applicable.

Carcinogenicity:

Not applicable.

Reproductive Toxicity:

Not applicable.

Specific Target Organ Toxicity from Single Exposure:

Not applicable.

Specific Target Organ Toxicity from Repeated Exposure:

Not applicable.

Aspiration Hazard:

Not applicable.

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Additional Toxicology Information:

Data not available.

SECTION 12: Ecological Information

12.1. Ecotoxicity

Not applicable.

12.2. Persistence and Degradability

Data not available.

12.3. Bioaccumulative Potential

Data not available.

12.4. Mobility in Soil

Data not available.

12.5. Other Adverse Ecological Effects

Data not available.

SECTION 13: Disposal Considerations

13.1. Waste Treatment Methods

Data not available.

SECTION 14: Transportation Information

14.1. Transportation by Land-Department of Transportation (DOT, United States of America)

Not regulated according to DOT Regulations.

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14.2. Transportation by Air - International Air Transport Association (IATA)

Not regulated according to IATA Dangerous Goods Regulations.

14.3 Transportation of Dangerous Goods (TDG, Canada)

Not regulated according to TDG Regulations.

SECTION 15: Regulatory Information

15.1. Occupational Safety and Health Administration (OSHA) Hazards

Lead (CAS # 7439-92-1): "30 µg/m³ Action Level (See 29 CFR 1910.1025); 50 µg/m³ TWA (See 29 CFR 1910.1025)" As Lead [7439-92-1]

Lead (CAS # 7439-92-1): "30 µg/m³ Action Level (See 29 CFR 1910.1025, as Pb); 50 µg/m³ TWA (See 29 CFR 1910.1025, as Pb)" As Lead, inorganic compounds [RR-00538-9]

Lead (CAS # 7439-92-1): 30 µg/m³ Action Level (See 29 CFR 1910.1025); 50 µg/m³ TWA (See 29 CFR 1910.1025)

Arsenic (CAS # 7440-38-2): "10 µg/m³ TWA (See 29 CFR 1910.1018, except Arsine, as As); 5 µg/m³ Action Level (See 29 CFR 1910.1018, except Arsine, as As)" As Inorganic arsenic compounds [RR-00065-7]

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15.2. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

Hydrofluoric Acid (CAS # 7664-39-3): "100 lb EPCRA RQ" As Hydrogen fluoride [7664-39-3]

Hydrofluoric Acid (CAS # 7664-39-3): "100 lb TPQ" As Hydrogen fluoride [7664-39-3]

Hydrofluoric Acid (CAS # 7664-39-3): 100 lb EPCRA RQ

Hydrofluoric Acid (CAS # 7664-39-3): 100 lb TPQ

Nitric Acid (CAS # 7697-37-2): "1000 lb EPCRA RQ" As Nitric acid [7697-37-2]

Nitric Acid (CAS # 7697-37-2): "1000 lb TPQ" As Nitric acid [7697-37-2]

Nitric Acid (CAS # 7697-37-2): 1000 lb EPCRA RQ

Nitric Acid (CAS # 7697-37-2): 1000 lb TPQ

15.3. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

Ammonium Hexafluorosilicate (IV) (CAS # 16919-19-0): "1000 lb final RQ; 454 kg final RQ" As Ammonium silicofluoride [16919-19-0]

Ammonium Hexafluorosilicate (IV) (CAS # 16919-19-0): 1000 lb final RQ; 454 kg final RQ

Lead (CAS # 7439-92-1): "10 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is $>100\ \mu\text{m}$); 4.54 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is $>100\ \mu\text{m}$)" As Lead [7439-92-1]

Lead (CAS # 7439-92-1): 10 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is $>100\ \mu\text{m}$); 4.54 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is $>100\ \mu\text{m}$)

Nickel (CAS # 7440-02-0): "100 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is $>100\ \mu\text{m}$); 45.4 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is $>100\ \mu\text{m}$)" As Nickel [7440-02-0]

Nickel (CAS # 7440-02-0): 100 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is $>100\ \mu\text{m}$); 45.4 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is $>100\ \mu\text{m}$)

Arsenic (CAS # 7440-38-2): "1 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is $>100\ \mu\text{m}$); 0.454 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is $>100\ \mu\text{m}$)" As Arsenic [7440-38-2]

Arsenic (CAS # 7440-38-2): 1 lb final RQ (no reporting of r

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15.4. Superfund Amendments and Reauthorization Act (SARA) 313 Toxic Release Inventory (TRI)

Barium Nitrate (CAS # 10022-31-8): "1.0 % de minimis concentration (includes any unique chemical substance that contains Barium as part of that chemical's infrastructure except for Barium sulfate CAS 7727-43-7, listed under Chemical Category N040)" As Barium compounds [RR-00555-0]

Barium Nitrate (CAS # 10022-31-8): "1.0 % de minimis concentration (includes any unique chemical substance that contains Barium as part of that chemical's infrastructure except for Barium sulfate CAS 7727-43-7, listed under Chemical Category N040)" As Barium compounds [RR-00555-0];
"1.0 % de minimis concentration (reportable only when in aqueous solution, listed under Chemical Category N511)" As Nitrate compounds, water dissociable [RR-03804-0]

Barium Nitrate (CAS # 10022-31-8): 1.0 % de minimis concentration (includes any unique chemical substance that contains Barium as part of that chemical's infrastructure except for Barium sulfate CAS 7727-43-7, listed under Chemical Category N040)

Barium Nitrate (CAS # 10022-31-8): 1.0 % de minimis concentration (reportable only when in aqueous solution, listed under Chemical Category N511)

Manganous Nitrate Tetrahydrate (CAS # 15710-66-4): "1.0 % de minimis concentration (includes any unique chemical substance that contains Manganese as part of that chemical's infrastructure, listed under Chemical Category N450)" As Manganese compounds [RR-00602-0]

Manganous Nitrate Tetrahydrate (CAS # 15710-66-4): "1.0 % de minimis concentration (includes any unique chemical substance that contains Manganese as part of that chemical's infrastructure, listed under Chemical Category N450)" As Manganese compounds [RR-00602-0];

"1.0 % de minimis concentration (reportable only when in aqueous solution, listed under Chemical Category N511)" As Nitrate compounds, water dissociable [RR-03804-0]

Manganous Nitrate Tetrahydrate (CAS # 15710-66-4): 1.0 % de minimis concentration (includes any unique chemical substance that contains Manganese as part of that chemical's infras

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15.5. Massachusetts Right-to-Know Substance List

Barium Nitrate (CAS # 10022-31-8): "Present" As Barium nitrate [10022-31-8]
Barium Nitrate (CAS # 10022-31-8): Present
Ammonium Hexafluorosilicate (IV) (CAS # 16919-19-0): "Present" As Ammonium silicofluoride [16919-19-0]
Ammonium Hexafluorosilicate (IV) (CAS # 16919-19-0): Present
Calcium Carbonate (CAS # 471-34-1): "Present (including dust)" As Calcium carbonate [1317-65-3]
Lead (CAS # 7439-92-1): "Teratogen" As Lead [7439-92-1]
Lead (CAS # 7439-92-1): Teratogen
Magnesium (CAS # 7439-95-4): "Present" As Magnesium [7439-95-4]
Magnesium (CAS # 7439-95-4): Present
Nickel (CAS # 7440-02-0): "Carcinogen; Extraordinarily hazardous" As Nickel [7440-02-0]
Nickel (CAS # 7440-02-0): Carcinogen; Extraordinarily hazardous
Arsenic (CAS # 7440-38-2): "Carcinogen; Extraordinarily hazardous" As Arsenic [7440-38-2]
Arsenic (CAS # 7440-38-2): Carcinogen; Extraordinarily hazardous
Copper (CAS # 7440-50-8): "Present" As Copper [7440-50-8]
Copper (CAS # 7440-50-8): Present
Zinc (CAS # 7440-66-6): "Present" As Zinc [7440-66-6]
Zinc (CAS # 7440-66-6): Present
Hydrofluoric Acid (CAS # 7664-39-3): "Extraordinarily hazardous" As Hydrofluoric acid [7664-39-3]
Hydrofluoric Acid (CAS # 7664-39-3): Extraordinarily hazardous
Nitric Acid (CAS # 7697-37-2): "Extraordinarily hazardous" As Nitric acid [7697-37-2]
Nitric Acid (CAS # 7697-37-2): Extraordinarily hazardous
Potassium Nitrate (CAS # 7757-79-1): "Present" As Potassium nitrate [7757-79-1]
Potassium Nitrate (CAS # 7757-79-1): Present

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15.6. Pennsylvania Right-to-Know Hazardous Substances

Barium Nitrate (CAS # 10022-31-8): "Environmental hazard" As Barium compounds [RR-00555-0]
Barium Nitrate (CAS # 10022-31-8): "Environmental hazard" As Nitric acid, barium salt [10022-31-8]
Barium Nitrate (CAS # 10022-31-8): "Present" As Barium compounds [RR-00555-0]
Barium Nitrate (CAS # 10022-31-8): "Present" As Nitric acid, barium salt [10022-31-8]
Barium Nitrate (CAS # 10022-31-8): Environmental hazard
Barium Nitrate (CAS # 10022-31-8): Present
Manganous Nitrate Tetrahydrate (CAS # 15710-66-4): "Environmental hazard" As Manganese compounds [RR-00602-0]
Manganous Nitrate Tetrahydrate (CAS # 15710-66-4): "Present" As Manganese compounds [RR-00602-0]
Manganous Nitrate Tetrahydrate (CAS # 15710-66-4): Environmental hazard
Manganous Nitrate Tetrahydrate (CAS # 15710-66-4): Present
Ammonium Hexafluorosilicate (IV) (CAS # 16919-19-0): "Environmental hazard" As Silicate(2-), hexafluoro-, diammonium [16919-19-0]
Ammonium Hexafluorosilicate (IV) (CAS # 16919-19-0): "Present" As Silicate(2-), hexafluoro-, diammonium [16919-19-0]
Ammonium Hexafluorosilicate (IV) (CAS # 16919-19-0): Environmental hazard
Ammonium Hexafluorosilicate (IV) (CAS # 16919-19-0): Present
Calcium Carbonate (CAS # 471-34-1): "Present" As Limestone [1317-65-3]
Lead (CAS # 7439-92-1): "Environmental hazard" As Lead [7439-92-1]
Lead (CAS # 7439-92-1): "Environmental hazard" As Lead compounds [RR-00630-4]
Lead (CAS # 7439-92-1): "Present" As Lead [7439-92-1]
Lead (CAS # 7439-92-1): "Present" As Lead compounds [RR-00630-4]
Lead (CAS # 7439-92-1): Environmental hazard
Lead (CAS # 7439-92-1): Present
Magnesium (CAS # 7439-95-4): "Present" As Magnesium [7439-95-4]
Magnesium (CAS # 7439-95-4): Present
Nickel (CAS # 7440-02-0): "Environmental hazard" As Nickel compounds [RR-00800-4]
Nickel (CAS # 7440-02-0): "Environmental hazard; Special hazardous substance" As Nickel [7440-02-0]
Nickel (CAS # 7440-02-0): "Present" As Nickel [7440-02-0]
Nickel (CAS # 7440-02-0): "Present" As Nickel compounds [RR-00800-4]
Nicke

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15.7. New Jersey Worker and Community Right-to-Know Components

Barium Nitrate (CAS # 10022-31-8): "sn 0186" As Barium nitrate [10022-31-8]

Barium Nitrate (CAS # 10022-31-8): "SN 2146 500 lb TPQ (except Barium sulfate CAS number 7727-43-7, Category Code N040. Includes any unique chemical substance that contains the named metal as part of that chemical structure)" As Barium compounds [RR-00555-0]

Barium Nitrate (CAS # 10022-31-8): "SN 2146 500 lb TPQ (except Barium sulfate CAS number 7727-43-7, Category Code N040. Includes any unique chemical substance that contains the named metal as part of that chemical structure)" As Barium compounds [RR-00555-0];

"SN 3722 500 lb TPQ (water dissociable, Category Code N511)" As Nitrate compounds [RR-01770-9]

Barium Nitrate (CAS # 10022-31-8): "sn 2146" As Barium compounds [RR-00555-0]

Barium Nitrate (CAS # 10022-31-8): "SN 3722 500 lb TPQ (water dissociable, Category Code N511)" As Nitrate compounds [RR-01770-9]

Barium Nitrate (CAS # 10022-31-8): "sn 3722" As Nitrate compounds [RR-01770-9]

Barium Nitrate (CAS # 10022-31-8): sn 0186

Barium Nitrate (CAS # 10022-31-8): sn 2146

Barium Nitrate (CAS # 10022-31-8): SN 2146 500 lb TPQ (except Barium sulfate CAS number 7727-43-7, Category Code N040. Includes any unique chemical substance that contains the named metal as part of that chemical structure)

Barium Nitrate (CAS # 10022-31-8): sn 3722

Barium Nitrate (CAS # 10022-31-8): SN 3722 500 lb TPQ (water dissociable, Category Code N511)

Manganous Nitrate Tetrahydrate (CAS # 15710-66-4): "SN 2324 500 lb TPQ (Category Code N450. Includes any unique chemical substance that contains the named metal as part of that chemical structure)" As Manganese compounds [RR-00602-0]

Manganous Nitrate Tetrahydrate (CAS # 15710-66-4): "SN 2324 500 lb TPQ (Category Code N450. Includes any unique chemical substance that contains the named metal as part of that chemical structure)" As Manganese compounds [RR-00602-0];

"SN 3722 500 lb TPQ (water dissociable, Category Code N511)" As Nitrate compounds [RR-01770-9]

Manganous



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15.8. California Proposition 65

Lead (CAS # 7439-92-1): "15 µg/day NSRL (oral)" As Lead [7439-92-1]

Lead (CAS # 7439-92-1): "carcinogen, 10/1/1992" As Lead [7439-92-1]

Lead (CAS # 7439-92-1): "carcinogen, 10/1/1992" As Lead compounds [RR-00630-4]

Lead (CAS # 7439-92-1): "developmental toxicity, 2/27/1987" As Lead [7439-92-1]

Lead (CAS # 7439-92-1): "female reproductive toxicity 2/27/87" As Lead [7439-92-1]

Lead (CAS # 7439-92-1): "male reproductive toxicity, 2/27/87" As Lead [7439-92-1]

Lead (CAS # 7439-92-1): 15 µg/day NSRL (oral)

Lead (CAS # 7439-92-1): carcinogen, 10/1/1992

Lead (CAS # 7439-92-1): developmental toxicity, 2/27/1987

Lead (CAS # 7439-92-1): female reproductive toxicity 2/27/87

Lead (CAS # 7439-92-1): male reproductive toxicity, 2/27/87

Nickel (CAS # 7440-02-0): "carcinogen, 10/1/1989 (metallic)" As Nickel [7440-02-0]

Nickel (CAS # 7440-02-0): "carcinogen, 5/7/2004" As Nickel compounds [RR-00800-4]

Nickel (CAS # 7440-02-0): carcinogen, 10/1/1989 (metallic)

Arsenic (CAS # 7440-38-2): "0.06 µg/day NSRL (inhalation); 10 µg/day NSRL (except inhalation)" As Arsenic [7440-38-2]

Arsenic (CAS # 7440-38-2): "0.06 µg/day NSRL (inhalation, listed under Arsenic); 10 µg/day NSRL (except inhalation, listed under Arsenic)" As Arsenic inorganic compounds [RR-00065-7]

Arsenic (CAS # 7440-38-2): "carcinogen, 2/27/1987" As Arsenic, inorganic compounds [RR-00065-7]

Arsenic (CAS # 7440-38-2): 0.06 µg/day NSRL (inhalation); 10 µg/day NSRL (except inhalation)

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15.9. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

Barium Nitrate (CAS # 10022-31-8): "Present" As Barium nitrate [10022-31-8] (DSL)
Barium Nitrate (CAS # 10022-31-8): Present (DSL)
Manganous Nitrate Tetrahydrate (CAS # 15710-66-4): "Present" As Manganese nitrate [10377-66-9] (DSL)
Manganous Nitrate Tetrahydrate (CAS # 15710-66-4): Present (DSL)
Ammonium Hexafluorosilicate (IV) (CAS # 16919-19-0): "Present" As Ammonium silicofluoride [16919-19-0] (DSL)
Ammonium Hexafluorosilicate (IV) (CAS # 16919-19-0): Present (DSL)
Calcium Carbonate (CAS # 471-34-1): "Present" As Calcium carbonate [1317-65-3] (NDSL)
Calcium Carbonate (CAS # 471-34-1): "Present" As Carbonic acid, calcium salt (1:1) [471-34-1] (DSL)
Calcium Carbonate (CAS # 471-34-1): Present (DSL)
Sodium Carbonate (CAS # 497-19-8): "Present" As Sodium carbonate [497-19-8] (DSL)
Sodium Carbonate (CAS # 497-19-8): Present (DSL)
Iron (CAS # 7439-89-6): "Present" As Iron [7439-89-6] (DSL)
Iron (CAS # 7439-89-6): Present (DSL)
Lead (CAS # 7439-92-1): "Present" As Lead [7439-92-1] (DSL)
Lead (CAS # 7439-92-1): Present (DSL)
Magnesium (CAS # 7439-95-4): "Present" As Magnesium [7439-95-4] (DSL)
Magnesium (CAS # 7439-95-4): Present (DSL)
Nickel (CAS # 7440-02-0): "Present" As Nickel [7440-02-0] (DSL)
Nickel (CAS # 7440-02-0): Present (DSL)
Arsenic (CAS # 7440-38-2): "Present" As Arsenic [7440-38-2] (DSL)
Arsenic (CAS # 7440-38-2): Present (DSL)
Copper (CAS # 7440-50-8): "Present" As Copper [7440-50-8] (DSL)
Copper (CAS # 7440-50-8): Present (DSL)
Zinc (CAS # 7440-66-6): "Present" As Zinc [7440-66-6] (DSL)
Zinc (CAS # 7440-66-6): Present (DSL)
Hydrofluoric Acid (CAS # 7664-39-3): "Present" As Hydrogen fluoride [7664-39-3] (DSL)
Hydrofluoric Acid (CAS # 7664-39-3): Present (DSL)
Nitric Acid (CAS # 7697-37-2): "Present" As Nitric acid [7697-37-2] (DSL)
Nitric Acid (CAS # 7697-37-2): Present (DSL)
Ammonium Dihydrogen Phosphate (CAS # 7722-76-1): Present (DSL)
Water (CAS # 7732-18-5): "Present" As Water [7732-18-5] (DSL)
Water (CAS # 7732-18-5): Present (DSL)
Potassium Nitrate

15.10. United States of America Toxic Substances Control Act (TSCA) List

All components of this solution are listed as active on the TSCA Inventory or are mixtures (hydrates) of active items listed on the TSCA Inventory.



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Barium Nitrate (CAS # 10022-31-8): "Present (ACTIVE)" As Nitric acid, barium salt (2:1) [10022-31-8]
Barium Nitrate (CAS # 10022-31-8): Present (ACTIVE)
Manganous Nitrate Tetrahydrate (CAS # 15710-66-4): "Present (ACTIVE)" As Nitric acid, manganese(2+) salt (2:1) [10377-66-9]
Manganous Nitrate Tetrahydrate (CAS # 15710-66-4): Present (ACTIVE)
Ammonium Hexafluorosilicate (IV) (CAS # 16919-19-0): "Present (ACTIVE)" As Silicate(2-), hexafluoro-, ammonium (1:2) [16919-19-0]
Ammonium Hexafluorosilicate (IV) (CAS # 16919-19-0): Present (ACTIVE)
Calcium Carbonate (CAS # 471-34-1): "Present (ACTIVE)" As Carbonic acid, calcium salt (1:1) [471-34-1]
Calcium Carbonate (CAS # 471-34-1): Present (ACTIVE)
Sodium Carbonate (CAS # 497-19-8): "Present (ACTIVE)" As Carbonic acid sodium salt (1:2) [497-19-8]
Sodium Carbonate (CAS # 497-19-8): Present (ACTIVE)
Iron (CAS # 7439-89-6): "Present (ACTIVE)" As Iron [7439-89-6]
Iron (CAS # 7439-89-6): Present (ACTIVE)
Lead (CAS # 7439-92-1): "Present (ACTIVE)" As Lead [7439-92-1]
Lead (CAS # 7439-92-1): Present (ACTIVE)
Magnesium (CAS # 7439-95-4): "Present (ACTIVE)" As Magnesium [7439-95-4]
Magnesium (CAS # 7439-95-4): Present (ACTIVE)
Nickel (CAS # 7440-02-0): "Present (ACTIVE)" As Nickel [7440-02-0]
Nickel (CAS # 7440-02-0): Present (ACTIVE)
Arsenic (CAS # 7440-38-2): "Present (ACTIVE)" As Arsenic [7440-38-2]
Arsenic (CAS # 7440-38-2): Present (ACTIVE)
Copper (CAS # 7440-50-8): "Present (ACTIVE)" As Copper [7440-50-8]
Copper (CAS # 7440-50-8): Present (ACTIVE)
Zinc (CAS # 7440-66-6): "Present (ACTIVE)" As Zinc [7440-66-6]
Zinc (CAS # 7440-66-6): Present (ACTIVE)
Hydrofluoric Acid (CAS # 7664-39-3): "Present (ACTIVE)" As Hydrofluoric acid [7664-39-3]
Hydrofluoric Acid (CAS # 7664-39-3): Present (ACTIVE)
Nitric Acid (CAS # 7697-37-2): "Present (ACTIVE)" As Nitric acid [7697-37-2]
Nitric Acid (CAS # 7697-37-2): Present (ACTIVE)
Ammonium Dihydrogen Phosphate (CAS # 7722-76-1): Present (ACTIVE)
Water (CAS # 7732-18-5): "Present (ACTIVE)" As Wa

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15.11. European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

Barium Nitrate (CAS # 10022-31-8): "233-020-5" As Barium nitrate [10022-31-8]
Barium Nitrate (CAS # 10022-31-8): 233-020-5
Manganous Nitrate Tetrahydrate (CAS # 15710-66-4): "233-828-8" As Manganese dinitrate [10377-66-9]
Manganous Nitrate Tetrahydrate (CAS # 15710-66-4): 233-828-8
Ammonium Hexafluorosilicate (IV) (CAS # 16919-19-0): "240-968-3" As Ammonium hexafluorosilicate [16919-19-0]
Ammonium Hexafluorosilicate (IV) (CAS # 16919-19-0): 240-968-3
Calcium Carbonate (CAS # 471-34-1): "207-439-9" As Calcium carbonate [471-34-1]
Calcium Carbonate (CAS # 471-34-1): 207-439-9
Sodium Carbonate (CAS # 497-19-8): "207-838-8" As Disodium carbonate [497-19-8]
Sodium Carbonate (CAS # 497-19-8): 207-838-8
Sodium Carbonate (CAS # 497-19-8): 231-420-4
Iron (CAS # 7439-89-6): "231-096-4" As Iron [7439-89-6]
Iron (CAS # 7439-89-6): 231-096-4
Lead (CAS # 7439-92-1): "231-100-4" As Lead [7439-92-1]
Lead (CAS # 7439-92-1): 231-100-4
Magnesium (CAS # 7439-95-4): "231-104-6" As Magnesium [7439-95-4]
Magnesium (CAS # 7439-95-4): 231-104-6
Nickel (CAS # 7440-02-0): "231-111-4" As Nickel [7440-02-0]
Nickel (CAS # 7440-02-0): 231-111-4
Arsenic (CAS # 7440-38-2): "231-148-6" As Arsenic [7440-38-2]
Arsenic (CAS # 7440-38-2): 231-148-6
Copper (CAS # 7440-50-8): "231-159-6" As Copper [7440-50-8]
Copper (CAS # 7440-50-8): 231-159-6
Zinc (CAS # 7440-66-6): "231-175-3" As Zinc [7440-66-6]
Zinc (CAS # 7440-66-6): 231-175-3
Hydrofluoric Acid (CAS # 7664-39-3): "231-634-8" As Hydrogen fluoride [7664-39-3]
Hydrofluoric Acid (CAS # 7664-39-3): 231-634-8
Nitric Acid (CAS # 7697-37-2): "231-714-2" As Nitric acid [7697-37-2]
Nitric Acid (CAS # 7697-37-2): 231-714-2
Ammonium Dihydrogen Phosphate (CAS # 7722-76-1): 231-764-5
Ammonium Dihydrogen Phosphate (CAS # 7722-76-1): 233-330-0
Water (CAS # 7732-18-5): "231-791-2" As Water [7732-18-5]
Water (CAS # 7732-18-5): 231-791-2
Potassium Nitrate (CAS # 7757-79-1): "231-818-8" As Potassium nitrate [7757-79-1]
Potassium Nitrate (CAS # 7757-79-1): 231-818-8
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SECTION 16: Other Information

16.1. Full Text of Hazard Statements and Precautionary Statements

Causes severe skin burns and eye damage. Causes serious eye irritation.

Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection.

IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water.). If eye irritation persists: Get medical attention. Wash contaminated clothing before reuse.

Store locked up.

Dispose of contents in accordance with local, state, federal and international regulations.

16.2. Miscellaneous Hazard Classes

Canadian Carcinogenicity Hazard Class: Not Applicable.

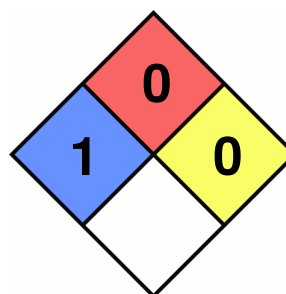
Physical Hazards Not Otherwise Classified (PHNOC): Not Applicable.

Health Hazards Not Otherwise Classified (HHNOC): Not Applicable.

Biohazardous Infectious Materials Hazard Class: Not Applicable.

16.3. National Fire Protection Association (NFPA) Rating

Health: 1
Flammability: 0
Reactivity: 0
Special Hazard:



16.4. Document Revision

Last Revision Date: 2025-02-02

DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.